

REMARKS

STATUS OF CLAIMS

Claims 1, 5-8, 10, 11, 15, 18, 22, 24, 27, 30-38, 40, 43, 44, 46 and 68 are pending.

Claims 1, 5-8, 10, 11, 15, 18, 22, 24, 27, 30-38, 40 and 68 are rejected.

Claims 43, 44 and 46 are allowed.

In accordance with the foregoing, the claims are amended, and, thus, the pending claims remain for reconsideration, which is respectfully requested.

No new matter has been added.

The Examiner's rejections are respectfully traversed.

**REJECTION OF CLAIMS 8, 11, 22, 40 AND 68 (INDEPENDENT) UNDER 35 U.S.C. §103(a)
AS BEING UNPATENTABLE OVER SEKI ET AL., U.S. PATENT NO. 6,734,513
(HEREINAFTER "SEKI"), IN VIEW OF ASADA ET AL., U.S. PATENT NO. 5,872,496
(HEREINAFTER "ASADA")**

Independent claim 68 is allegedly unpatentable over Seki and Asada.

In accordance with the foregoing, claim 68 is amended to recite, in part: "the movable plate including: a frame sandwiched between the first and second substrates forming a hermetical sealed structure, a portion having ~~an electrode as a~~ movable electrode facing the stationary electrode, and a ~~contact as a~~ movable contact facing the stationary contact, and a plurality of hinge springs movingly suspending the portion from the frame while maintaining a parallel state relative to the first and second substrates." Support for the claim amendment can be found, for example, in the specification at page 15, lines 1-24. Applicants respectfully submit that Seki and Asada fail to disclose, either expressly or implicitly, the same.

The Office Action relies upon the Seki support beams 23 to disclose the claimed "hinge springs." Seki, at column 5, lines 12-18 recite:

As shown in FIG. 3, the movable element 20 is such that a movable electrode 24 is supported via four support beams 23 extending from a planar, generally C-shaped anchor 22 so as to be driven in the thickness direction. The support beams 23 are formed by forming slits 21. In the movable electrode 24, a movable contact piece 26 is defined by two slits 25, 25 that are juxtaposed at the center of the movable electrode 24.

However, Applicants respectfully submit that Seki fails to disclose, either expressly or implicitly the claimed "hinge springs movingly suspending the portion from the frame while maintaining a parallel state relative to the first and second substrates," as recited in claim 68, because the configuration of the support beams 23 disclosed in Seki (see the lower left-hand side of the movable electrode 24, as seen in FIG. 3 of Seki) only allow the moveable electrode to move in a non-perpendicular direction and would inhibit the movable electrode 24 of Seki from "movingly suspending the portion from the frame while maintaining a parallel state relative to the first and second substrates." That is, Seki would not be able to maintain "a parallel state relative to the first and second substrates."

Furthermore, Asada, at column 4, lines 28-32 recites:

The planar movable plate 5, and **torsion bars 6, 6** for axially supporting the movable plate 5 at a central location thereof **so as to be swingable in a perpendicular direction relative to the silicon substrate 2**, are formed integrally with the silicon substrate 2 by anisotropic etching.

In other words, Asada discusses that a movable plate swings in perpendicular direction relative to the substrate. Accordingly, Applicants respectfully submit that Asada fails to disclose, either expressly or implicitly, the claimed "hinge springs movingly suspending the portion from the frame while maintaining a parallel state relative to the first and second substrates," as recited in claim 68, because Asada discusses torsion bars which allow movable plate 5 to swing in a perpendicular direction relative to the silicon substrate 2.

Accordingly, Applicants respectfully submit that a *prima facie* case of obviousness cannot be based upon Seki and Asada, because there is no evidence that one skilled in the art would combine Seki's support beams 23 which only allow the moveable electrode to move in a non-perpendicular direction with Asada's torsion bar 6 with perpendicular direction movement, and modify the combination to include the claimed "hinge springs movingly suspending the portion from the frame while maintaining a parallel state relative to the first and second substrates," as recited in claim 68, and seen the benefit of "allowing the portion to move while maintaining a parallel state relative to the first and second substrates."

Dependent claims recite patentably distinguishing features of their own or are at least patentably distinguishing due to their dependence from the independent claims. Withdrawal of the rejection of pending claims and allowance of pending claims is respectfully requested.

REJECTION OF CLAIMS 6, 7, 24, 27 AND 30-36 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER SEKI ET AL., IN VIEW OF ASADA, IN FURTHER VIEW OF HYMAN ET AL., U.S. PATENT NO 6,504,118 (HEREINAFTER "HYMAN")

Independent claims 24, 27 and 30-36 are allegedly unpatentable over Seki, in view of Asada, in further view of Hyman.

Applicants respectfully submit that Hyman fails to disclose, either expressly or implicitly, the claimed "plurality of hinge springs movingly suspending the movable portion from the frame while maintaining a parallel state relative to the first and second substrates," as recited in amended claim 24, because, as seen, for example, in FIGS. 13A -13C of Hyman, the armatures 309 and 389 are not "[movable] while maintaining a parallel state relative to the first and second substrates," because one end is fixed at ends 310 and 190, respectively, and the opposite end is deflectable. Accordingly, Applicants respectfully submit that Hyman fails to correct the deficiencies in Seki and Asada.

Accordingly, Applicants respectfully submit that a *prima facie* case of obviousness cannot be based upon Seki, Asada and Hyman, because there is no evidence that one skilled in the art would combine Seki's support beams 23 which only allow the moveable electrode to move in a non-perpendicular direction with Asada's torsion bar 6 with perpendicular direction movement and Hyman's fixed at one end armatures, and modify the combination to include the claimed "plurality of hinge springs movingly suspending the movable portion from the frame while maintaining a parallel state relative to the first and second substrates," as recited in claim 24, and seen the benefit of "allowing the portion to move while maintaining a parallel state relative to the first and second substrates."

Applicants respectfully submit that independent claims 27 and 30-36 patentably distinguish over the cited references for similar reasons as independent claim 24.

Dependent claims 6 and 7 recite patentably distinguishing features of their own or are at least patentably distinguishing due to their dependence from the independent claims. Withdrawal of the rejection of pending claims, and allowance of pending claims is respectfully requested.

REJECTION OF CLAIMS 1, 5, 8, 11, 18, 22 AND 40 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER SEKI ET AL., IN VIEW OF ASADA, IN FURTHER VIEW OF DeREUS, U.S. PATENT NO. 6,876,482 (HEREINAFTER "DeREUS")

Independent claims 1 and 18 are allegedly unpatentable over Seki, in view of Asada, in further view of DeReus.

Applicants respectfully submit that DeReus fails to disclose, either expressly or implicitly, the claimed "plurality of hinge springs movingly suspending the movable portion from the frame while maintaining a parallel state relative to the first and second substrates," as recited in amended claim 1, because, as seen, for example, in FIGS. 2 and 9 of DeReus, the beams 108 and 702, respectively, have one end fixed at mount (110) and only the opposite end is deflectable, but are not "[movable] while maintaining a parallel state relative to the first and second substrates." Accordingly, Applicants respectfully submit that DeReus fails to correct the deficiencies in Seki and Asada.

Accordingly, Applicants respectfully submit that a *prima facie* case of obviousness cannot be based upon Seki, Asada and DeReus, because there is no evidence that one skilled in the art would combine Seki's support beams 23 which only allow the moveable electrode to move in a non-perpendicular direction with Asada's torsion bar 6 with perpendicular direction movement and with DeReus' fixed beams, and modify the combination to include the claimed "plurality of hinge springs movingly suspending the movable portion from the frame while maintaining a parallel state relative to the first and second substrates," as recited in claim 1, and seen the benefit of "allowing the portion to move while maintaining a parallel state relative to the first and second substrates."

Independent claim 18 patentably distinguishes over the cited references for similar reasons as independent claim 1.

Dependent claims recite patentably distinguishing features of their own or are at least patentably distinguishing due to their dependence from the independent claims. Withdrawal of the rejection of pending claims, and allowance of pending claims is respectfully requested.

REJECTION OF CLAIMS 37 AND 38 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER SEKI ET AL., IN VIEW OF ASADA, IN FURTHER VIEW OF DeREUS, AND IN FURTHER VIEW OF HYMAN.

Independent claims 37 and 38 are allegedly unpatentable over Seki, in view of Asada, in further view of DeReus and in further view of Hyman.

Applicants respectfully submit that a *prima facie* case of obviousness cannot be based upon Seki's support beams 23 which only allow the moveable electrode to move in a non-perpendicular direction with Asada's torsion bar 6 with perpendicular direction movement,

DeReus' fixed beams and Hyman's Hyman's fixed at one end armatures, because there is no evidence that one skilled in the art would combine Seki, Asada, DeReus and Hyman, and modify the combination to include the claimed "plurality of hinge springs movingly suspending the movable portion from the frame while maintaining a parallel state relative to the first and second substrates," as recited in claim 37, and seen the benefit of "allowing the portion to move while maintaining a parallel state relative to the first and second substrates."

Independent claim 38 patentably distinguishes over the cited references for similar reasons as independent claim 37.

ALLOWABLE SUBJECT MATTER:

The Office Action, at page 11, indicated that claims 43, 44, 46 are allowed. Furthermore, applicants respectfully submit independent claims 1, 15, 18, 24, 27, 30-38 and 68 patentably distinguish over the cited prior art and are allowable.

CONCLUSION

In view of the remarks presented above, there being no further outstanding objections or rejections, it is respectfully submitted that the application is in condition for allowance, and withdrawal of the rejection of pending claims and allowance of pending claims is respectfully requested. An early action to that effect is courteously solicited.

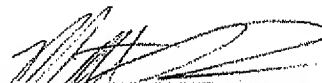
If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Respectfully submitted,

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